AN ASSESSMENT OF INTELLIGENCE PREPARATION OF THE BATTLEFIELD DOCTRINE FOR HUMANITARIAN ASSISTANCE OPERATIONS

A Monograph
By
Major Lauri J. Snider
Military Intelligence

MENS EST CLAVIS VICTORIAE

19960617 022

School of Advanced Military Studies
United States Army Command and General Staff College
Fort Leavenworth, Kansas

First Term AY 95-96

REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

1. AGENCY USE ONLY *(Leave blank)*	2. REPORT DATE	3. REPORT TYPE AND DATES COVERED

4. TITLE AND SUBTITLE

An Assessment of Intelligence Preparation of the Battlefield Doctrine for Humanitarian Assistance Operations

5. FUNDING NUMBERS

6. AUTHOR(S)

MAJOR Lauri J. Snyder

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)

School of Advanced Military Studies
Command & General Staff College
Fort Leavenworth, KS 66027

8. PERFORMING ORGANIZATION REPORT NUMBER

9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)

Command & General Staff College
Ft Leavenworth, KS 66027

10. SPONSORING/MONITORING AGENCY REPORT NUMBER

11. SUPPLEMENTARY NOTES

12a. DISTRIBUTION/AVAILABILITY STATEMENT

APPROVED FOR PUBLIC RELEASE:
DISTRIBUTION UNLIMITED.

12b. DISTRIBUTION CODE

13. ABSTRACT *(Maximum 200 words)*

(see attached)

14. SUBJECT TERMS

IPB
Intelligence Preparation of the Battlefield
Humanitarian Assistance Operations

15. NUMBER OF PAGES

50

16. PRICE CODE

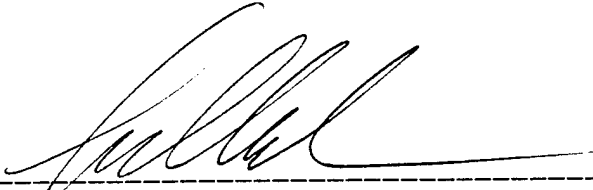| 17. SECURITY CLASSIFICATION OF REPORT	18. SECURITY CLASSIFICATION OF THIS PAGE	19. SECURITY CLASSIFICATION OF ABSTRACT	20. LIMITATION OF ABSTRACT

SCHOOL OF ADVANCED MILITARY STUDIES
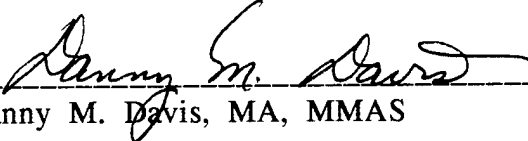
MONOGRAPH APPROVAL

Major Lauri J. Snider

Title of Monograph: An Assessment of Intelligence
Preparation of the Battlefield Doctrine
for Humanitarian Assistance Operations

Approved by:

_____Monograph Director
LTC Michael M. Burke, MBA, MMAS

_____Director, School of
COL Danny M. Davis, MA, MMAS   Advanded Military
                                                     Studies

_____Director, Graduate
Philip J. Brookes, Ph.D.   Degree Program

Accepted this _____ day of December, 1995
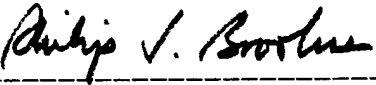
ABSTRACT

AN ASSESSMENT OF INTELLIGENCE PREPARATION OF THE
BATTLEFIELD DOCTRINE FOR HUMANITARIAN ASSISTANCE
OPERATIONS by MAJ Lauri J. Snider, USA, 55 pages.

This monograph assesses the process of Intelligence
Preparation of the Battlefield (IPB) for humanitarian assistance
operations. Three case studies of operations conducted overseas for
which humanitarian assistance was the primary focus serve as the
basis for the assessment. The case studies illustrate how the IPB
process is an inadequate tool for analyzing the complex
environments in which humanitarian assistance operations take
place. This monograph concludes with some recommendations for
intelligence preparation based on Peter M. Senge's writings on
general systems thinking.

The body of the monograph presents background on
humanitarian assistance operations, IPB, and the case studies. It
draws on the U.S. National Security Strategy and the Joint
Publications series to define the U.S. military role in humanitarian
assistance operations. Background on the IPB process comes from
1994 version of Field Manual 34-130, <u>Intelligence Preparation of the
Battlefield</u>. This section identifies the implicit and explicit
assumptions of the process. The monograph then discusses the case
studies in terms of the assumptions.

The analysis and evaluation section points out how the IPB
process was an inadequate analytical tool for dealing with the
complex environments of the three case studies. The assumptions
inherent in the process were too limiting. The process did not
facilitate an accurate understanding of the threats to U.S. forces or
how to best accomplish the missions.

Finally, a consideration of theory draws on Senge's discussion
of mental models and dynamic complexity. Overcoming the
limitations that the IPB process creates involves breaking the
present mental model and learning to deal with dynamic complexity.
Taking advice from Senge's approach, the monograph recommends
changing the IPB doctrine. It calls for a new process based on a
different set of assumptions and not reliant on templates, but
adapted to uncertainty, change, and the importance of
interrelationships.

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I. INTRODUCTION

In its most traditional sense, military doctrine is a statement of how armed forces intend to fight. It is an authoritative statement that provides guidance on how to conduct operations. The U.S. Army's key doctrinal publication, FM 100-5, Operations, states that doctrine "facilitates communications between Army personnel no matter where they serve, establishes a shared professional culture and approach to operations, and serves as the basis for curriculum in the Army school system."[1]

The most recent version of Operations codifies important changes from earlier versions. It established guidelines for how the Army should conduct itself not only in war, but in operations other than war. FM 100-5 states that doctrine: ". . . is the condensed approach to fighting, influencing events in operations other than war, and deterring actions detrimental to national interests."[2]

FM 100-5 contains a full chapter on operations other than war. In this manner the doctrine addresses the increasing frequency with which U.S. Army forces find themselves committed to operations at the lower end of the spectrum of conflict. FM 100-5 identifies thirteen types of activities in operations other than war. One of those activities, Humanitarian Assistance and Disaster Relief, is the focus of this monograph.[3]

Operations also establishes the requirement for U.S. Army forces to anticipate the environments in which they will operate. That requirement is especially critical as the movement of forces from the continental U.S. -- force projection operations -- becomes the primary means of employing the U.S. military overseas.

Intelligence Preparation of the Battlefield, also know as "IPB," is one of the process that is key to successful anticipation.[4]

The purpose of IPB is to help commanders make decisions. It is a systematic and continuous process used to accomplish essentially two tasks. The first task is to describe the tactical environment. The second task is to describe the effects of the environment on the operations of both friendly and threat forces.[5]

The IPB tasks require the analyst to identify threat(s) to U.S. forces and to predict what actions those threats will take. Previously, the Soviet Union was the threat around which U.S. doctrine centered. Since the end of the Cold War, identifying and defining the threat has become a challenge in planning U.S. military operations. FM 100-5 states:

> Unlike the Cold War era -- when threats were measurable and, to some degree, predictable -- Army forces today are likely to encounter conditions of greater ambiguity and uncertainty. Doctrine must be able to accommodate this wider variety of threats.[6]

The IPB process hinges on how much information U.S. forces know about the threat, and what assumptions they make about the threat.

The U.S. Army's primary doctrinal manual that describes how to conduct IPB is FM 34-130, Intelligence Preparation of the Battlefield. It asserts that the IPB process remains ". . . constant regardless of the mission, unit staff section, or echelon."[7] The manual further states that there are two differences between the IPB process in war and operations other than war--the requirements for a higher degree of detail and for inclusion of demographic analysis.

> The art of applying IPB to operations other than war is in the proper application of the steps to specific situations. The primary difference between IPB for conventional war and operations other than war is focus -- the degree of detail required--and the demand for demographic analysis required to support the decision making process.[8]

But the experiences of at least some of the intelligence officers involved in humanitarian assistance operations contradict these premises. In reality the IPB process is not adequate at all echelons and for all missions. Simply adding more detail and including a demographic analysis does not make it adequate.

The purpose of this monograph is to assess the doctrinal process of intelligence preparation of the battlefield for humanitarian assistance operations. The basic assumptions of the IPB process and three recent case studies of humanitarian assistance operations are the basis for the assessment. A discussion of those assumptions and the case studies are in the body of this paper. The case studies indicate that there are more issues to consider than demographics or the amount of detailed information. The factors that separate humanitarian assistance operations from conventional warfare are more complex and require more careful analysis than is incorporated in the current doctrine for IPB.

The body of the monograph will demonstrate that aspects of IPB may apply in some cases, but the current doctrinal process is not adequate for humanitarian assistance operations. The underlying assumptions of IPB limit a commander's or a planner's ability to anticipate an operating environment. Humanitarian assistance operations are characteristically complex and require alternative means of analysis.

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The final section of the monograph highlights some aspects of general systems theory that describe why and how the IPB process should change. The theoretical concepts of mental models and dynamic complexity facilitate understanding the problems inherent to IPB and point to the requirements for new means of analysis. Those means need to account for new assumptions derived from a more accurate understanding of the complex nature of the operating environments.

II.A. U.S. ARMY DOCTRINE FOR MILITARY OPERATIONS OTHER THAN WAR AND HUMANITARIAN ASSISTANCE OPERATIONS

The U.S. National Security Strategy of Engagement and Enlargement (NSS), published in February, 1995, acknowledges a fundamental change in America's security objectives since the end of the Cold War. It recognizes security risks that are not solely military in nature. It also recognizes a role for U.S. forces to provide assistance to victims of humanitarian disasters. According the NSS, humanitarian interests constitute one of three basic categories of national interests that can merit the use of armed forces. The NSS explains the appropriate use of U.S. military forces for humanitarian assistance as:

> When a humanitarian catastrophe dwarfs the ability of civilian relief agencies to respond; when the need for relief is urgent and only the military has the ability to jump-start the longer-term response to the disaster; when the response requires resources unique to the military; and when the risk to American troops is minimal. Rwanda is a good case in point. U.S. military forces performed unique and essential roles, stabilized, and then got out, turning the operation over to the international relief community.[9]

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Joint doctrine, concerned with all the U.S. military departments, addresses humanitarian assistance and disaster relief operations as one category of activities in Military Operations Other Than War (MOOTW). The Joint Operations manual, JP-3-0, contrasts MOOTW with war. War involves the employment of the military instrument of national power to conduct "large scale, sustained combat operations."[10] The goal of such operations is to "win as quickly and with as few casualties as possible."[11] MOOTW may involve the use or threat of force, but they "focus on deterring war and promoting peace."[12]

Operations other than war (OOTW) emerged as a significant aspect of U.S. Army doctrine in the 1993 version of FM 100-5, Operations. The manual notes that the OOTW missions are not new to the Army.[13] Such periods in American history as Reconstruction during 1865 to 1877, or the U.S. intervention in the Dominican Republic from 1955 to 1965 involved extensive Army participation in operations that were not war.[14][15] But the relevance of such operations in current U.S. Army doctrine is a change from the past.

Much of what now falls into the category of OOTW previously came under the term "low intensity conflict" or "LIC." In the 1980's and early 1990's, LIC operations dealt exclusively with political-military conflict situations seen as subordinate and peripheral to the larger contest between the Soviet and U.S. superpowers.[16] LIC included support for insurgency and counterinsurgency, terrorism counteraction, peacekeeping operations, and peacetime contingencies. Humanitarian assistance to "Third World" populations received brief attention as part of US military support to insurgency operations.

LIC included disaster relief operations to victims of disasters abroad within the context of peacetime contingency operations.[17]

The transition from the term LIC to the broader concept of OOTW paralleled the changing perceptions of the world as the Soviet Union collapsed. Terms and definitions associated with the ideas of peace, conflict, and war underwent revision. The 1993 version of FM 100-5 recognized OOTW type missions for the first time in the key doctrinal manual for U.S. Army operations.[18]

FM 100-5, Operations, cites the increasing pace, frequency, and variety of OOTW missions in the last three decades. It describes the ubiquitous nature of these missions:

> Operations other than war may precede and/or follow war or occur simultaneously with war in the same theater. They may be conducted in conjunction with wartime operations to complement the achievement of strategic objectives. They may support a combatant commander's forward-presence operations or a US ambassador's country plan. They may occur in the United States. They are designed to promote regional stability, maintain or achieve democratic end states, retain US influence and access abroad, provide humane assistance to distressed areas, protect US interests, and assist US civil authorities.[19]

A related publication is a revised version of FM 100-20, still in draft form and now titled Operations Other Than War rather than LIC. This manual describes OOTW as primarily political acts:

> Operations other than war provide the United States (US) government an alternative to war. They are not merely the road to war nor a cleaning up afterward. They are a way to achieve national policy objectives without entanglement in an unplanned, undesired, and unnecessary war. . . . Operations other than war, not being war, are primarily political processes,

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sometimes accompanied by violence. . . . Therefore, policy matters are very close to the surface in these operations.[20]

Within this context of operations other than war and the new National Military Strategy, the U.S. Department of Defense conducts humanitarian assistance operations. According to joint military doctrine, humanitarian assistance programs provided by US forces:

> . . . relieve or reduce the results of natural or man-made disasters or other endemic conditions such as human pain, disease, hunger, or privation that might present a serious threat to life or that can result in great damage to or loss of property. Humanitarian assistance provided by US forces is limited in scope and duration. The assistance provided is designed to supplement or complement the efforts of the host nation civil authorities or agencies that may have the primary responsibility for providing humanitarian assistance.[21]

There are many different facets of humanitarian assistance in which US military forces may participate. They include both domestic and foreign support programs. In domestic operations, active duty military forces provide support to civilian agencies. Most foreign humanitarian assistance programs are joint or multinational operations. Such programs may be the singular focus of an operation, where forces would deploy, for example, as the third category of the National Security Strategy prescribes. Alternatively, humanitarian assistance may fall under a broader mission, such as a peace operation or a post-conflict operation. The case studies for this monograph are from the former category -- operations conducted overseas where humanitarian assistance was the primary focus.[22]

The environments in which humanitarian assistance operations take place are complex and potentially dangerous. Political, economic, social and other factors outside the U.S. military's span of

control heavily influence humanitarian assistance operations. The National Security Strategy states that U.S. military forces will deploy solely for humanitarian interests only when the risk to American troops is minimal.[23] However, the threats to U.S. forces that can evolve in such operations are considerable. In reality, the threats to U.S. forces may range from benign to dangerous. The operations in Rwanda and Somalia both evolved to situations where dangers to U.S. forces were potentially high. Mission success and the safety of U.S. soldiers rely on intelligence efforts that produce accurate and thorough assessments of the environments in which humanitarian assistance operations take place.

II.B. U.S. ARMY DOCTRINE FOR INTELLIGENCE PREPARATION OF THE BATTLEFIELD (IPB).

Intelligence preparation of the battlefield (IPB) is not a uniquely modern idea. The writing's of Sun Tzu (403-221 BC) include weather and terrain among five criteria by which to appraise a situation in order to gauge the outcome of war.[24] Sun Tzu also stresses the importance of foreknowledge -- intelligence -- about the enemy situation. "Intelligence," Sun Tzu states, "is the essence of warfare -- it is what armies depend upon in their every move."[25]

The precursor of the current framework for integrating threat doctrine into an intelligence process appeared during the United States' Cold War with the Soviet Union. Training Circular 34-3, titled Intelligence Preparation of the Battlefield, was one of the earliest publications outlining the process. The U.S. Army published the circular in 1981. The process portrayed in that pamphlet and carried forward today is a fairly simple one. Using what it calls the "Wet

Trilogy," TC 34-3 distills the significant elements of the process to weather, enemy, and terrain.[26] The tools of the process are a series of charts and templates that finally result in a graphic depiction of the intelligence estimate called the "decision support template."[27]

Perhaps the most prominent feature of the process as TC 34-3 describes it is that there is only one enemy to consider, the Soviet military. On the first page of the chapter titled Threat Evaluation one finds a chart comparing Soviet and United States "battlefield functional systems."[28] No other potential enemy receives attention.

The early pamphlet evolved into the current the principal doctrinal manual for IPB, FM 34-130. The 1994 version of FM 34-130 includes many more considerations than the 1981 version of TC 34-3. Yet FM 34-130 bases its framework on the original. The process still centers on a Soviet style threat.

Other field manuals and training documents also address the IPB process. They include manuals: Special Operations Forces Intelligence and Electronic Warfare Operations (FM 34-36), Training Support Package on Humanitarian Assistance and Disaster Relief, and Intelligence and Electronic Warfare Support to Low Intensity Conflict Operations (FM 34-7). These documents offer important considerations but none of them serves as a comprehensive reference for IPB in humanitarian assistance operations. FM 34-36 offers examples of alternative IPB products but does not specifically address humanitarian assistance operations.[29] The TSP details a number of important points, but generally refers to the original IPB process as portrayed in FM 34-130.[30] FM 34-7 does not specifically address humanitarian assistance, and it also refers to the original IPB

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process.[31]   For humanitarian assistance operations conducted by conventional forces, FM 34-130 remains the key reference for Intelligence Preparation of the Battlefield.

FM 34-130 describes the use of IPB in directing the intelligence effort and driving the staff's planning for operations.   The intent of the manual is to "serve as a guide for the use of IPB by units of all types, at all echelons, *across the entire spectrum of conflict,* and during the conduct of any mission [emphasis added]."[32]   The manual also states the caveat that it does not contain the data required to conduct IPB, but rather focuses on how to apply the IPB process to any situation.[33]

According to FM 34-130, "IPB is a systematic, continuous process of analyzing the threat and the environment in a specific geographic area.   It is designed to support staff estimates and military decision making."[34]   IPB is supposed accomplish two objectives to assist the commander: 1)   Determine the threat's likely course of action; 2)   Describe the environment and its effects.   These objectives, according to FM 34-130, may be accomplished by following four steps:

(1)   Define the battlefield environment
(2)   Describe the battlefield's effects
(3)   Evaluate the threat
(4)   Determine threat courses of action[35]

Each of these steps results in products that the commander may use in making decisions.   The manual places considerable emphasis on attempting to make the products graphic.   The key graphical products include situation templates and decision support templates.   The purpose of those templates is to convey a great deal

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of information about the enemy in a concise, visual form that supports the friendly commander's decision making. Situation templates depict threat dispositions, based on threat doctrine and the effects of the battlefield. Prominent time phase lines depict the flow of the operation. A decision support template becomes the graphic record of the wargaming process. It depicts points in space and time called decision points, as well as other important information required to execute a specific friendly course of action.[36]

Each step of the IPB process also involves implicit and explicit assumptions. A detailed explanation of the steps of IPB serves to highlight the products and the assumptions in the process.

Step (1): Define the battlefield environment. This step involves identifying the important aspects of the battlefield in order to focus the intelligence collection effort. Two areas acquire definition here. The first definition relates to the "area of interest" -- a geographic area "from which information and intelligence are required to permit planning or successful conduct of the command's operation."[37] The second definition for the "area of operations" is usually assigned by a unit's higher command, or is determined through coordination of the intelligence officer, the operations officer, and the commander. The area of operations is "that portion of an area of conflict necessary for military operations."[38]

In addition to the areas of operation and interest, the intelligence officer should identify characteristics of the battlefield that will require further analysis. The manual suggests the characteristics of terrain, weather, logistical infrastructure, and demographics. Weather and terrain receive the most emphasis in FM

34-130 and other manuals and briefing formats.[39]   At this point, the intelligence officer should be able to identify "gaps in current intelligence holdings and the specific intelligence required to fill them."[40]

The products for step one are the defined areas of interest and operations, and the initial identification of intelligence gaps. The areas of operation and interest are usually portrayed graphically on a map. The gaps form the basis for specific statements of intelligence requirements, or taskings to the collection and information processors throughout the intelligence apparatus.

Step (2): Describe the battlefield's effects. This step involves evaluation of the effects of the battlefield on both the friendly and enemy actions. The intelligence officer "identifies the limitations and opportunities the environment offers on the potential operations of friendly and threat forces."[41] The manual states that consideration of terrain and weather are always part of an environmental assessment, but may also include other characteristics. This step focuses on how the environment affects the capabilities of each force.[42]

The importance of graphic products is evident in this step. The manual suggests a variety of overlays pertaining to obstacles, weather, terrain, and population. The intelligence officer is to ensure that the products "focus on the *effects* of the battlefield environment."[43]

Step (3): Evaluate the threat. Here an analysis of the intelligence holdings is supposed to aid in determining how the

threat normally organizes for and conducts combat operations. The manual states:

> When facing a well-known threat, the G2/S2 can rely on his historical data bases and well developed threat models. When operating against a new or less well-known threat, he may need to develop his intelligence data bases and threat models concurrently.[44]

The product of this step is a threat model. The model's graphic form is doctrinal templates. The purpose of the templates is to depict "how the threat operates when unconstrained by the effects of the battlefield environment."[45]

Step (4). Determine threat courses of action. This step relies on the previous three steps as a basis to form a conclusion about what the threat is most likely to do. The manual articulates the logic flow as follows:

> Given what the threat normally prefers to do, and the effects of the specific environment in which he is operating now, what are his likely objectives and the COA's available to him?[46]

The products of step four are predictions. In graphic form they are depiction on a map of how enemy forces will array physically on the ground at given points in time.

FM 34-130 points out that these predictions are not possible without the intelligence officer insuring that he or she has:

> - Adequately analyzed the friendly mission throughout the time duration of the operation; identified the physical limits of the AO and AI; and identified every characteristic of the battlefield environment that might affect the operation (step 1).
>
> - Identified the opportunities and constraints the battlefield environment offers to threat and friendly forces (step 2).

- Thoroughly considered what the threat is capable of what he prefers to do in like situations if unconstrained by the battlefield environment step (step 3).[47]

A close look at each of the four steps reveals that there are assumptions inherent in the traditional process for intelligence preparation of the battlefield. Grouping the assumptions permits their statement in the following summary form:

1. The most critical elements of the environment are weather, terrain, and the enemy in a discrete geographic area.

2. There is an identifiable enemy or threat that will conduct something that resembles combat operations.

3. There is a substantial data base of information that can reveal how the threat organizes and conducts combat. If such a data base does not exist, there will be enough time and information to develop one.

4. That the enemy's actions and the effects of the environment on the enemy are predictable.

Evidence of the first assumption appears in how the IPB process developed and in its current application. The "Wet Trilogy" (representing weather, enemy, terrain) in early versions of the IPB manual points to the three critical elements exclusively. Current applications of IPB, such as mission analysis briefing formats for example, also focus on these three aspects of the environment. The acronym METT-T, which stands for mission, enemy, troops, terrain and weather, and time available, is the current expanded version of WET that incorporates those three elements. METT-T encapsulates

the mission analysis process on which U.S. forces rely to assess their operating environment.[48]

The second assumption heavily influences the entire IPB process. There is an expectation in the process that there is an enemy that is symmetrically opposed to U.S. forces and is organized to conduct combat operations. This view of the enemy stems from conventional Soviet versus U.S. tactical doctrine that was the model for early versions of IPB. Part of the assessment of the enemy includes a "battlefield calculus" that numerically compares the enemy versus friendly strength.[49] The numbers used in the calculus derive from numbers of tanks and artillery pieces. The assumption really is that the enemy will *look* like the (former) Soviet military forces.

The third assumption also relates to the earlier Soviet model. Large data bases reflect extensive research and analysis of Soviet equipment, organization, and doctrine conducted over many years of studying that singular threat. The data bases are massive and widely available in a variety of forms.

The fourth assumption relies on the first three. The ability to predict relies on an accurate assessment of the environment and the enemy, and an extensive data base. It depends on the ability to make templates of enemy actions in order to predict what the enemy will do.

These four assumptions underlie the IPB process as current U.S. doctrine portrays it. Regardless of the mission or the situation, the doctrinal model assumes that METT-T will serve as a guide for analysis, the threat's characteristics are known (or knowable), and

the threat's actions are predictable. How these assumptions bear on intelligence preparation for humanitarian assistance operations is the question this monograph tries to answer.

Chapter six of the 1994 version of FM 34-130 is "Intelligence Preparation of the Battlefield for Operations Other Than War." The first section of the chapter addresses humanitarian assistance and disaster relief operations specifically. It adds guidelines to each of the IPB steps in an attempt to adapt the process to the different operational context.[50]

The guidelines consist of a series of special or additional considerations for each step of the IPB process. For example, to evaluate the threat, one guideline is to:

> Identify and evaluate the threat posed by any groups that may oppose friendly force operations. Consider groups that may clandestinely oppose the operation even though they publicly pledge support.[51]

(See Appendix A for the complete list of guidelines from FM 34-130 for humanitarian assistance and disaster relief operations). Fundamental differences as the nature of the threat, however, are not supposed to change the IPB process.

The basic premise of the doctrine as conveyed in the IPB manual is that the IPB process does not change for humanitarian assistance operations or any operations other than war. In the introduction to its OOTW chapter, the manual states:

> The four steps of the IPB process remain constant regardless of the mission, unit, staff section, or echelon. The art of applying IPB to operations other than war is in the proper application of the steps to specific situations. The primary difference between IPB for conventional war and operations other than

war is focus -- the degree of detail required -- and the demand for demographic analysis required to support the decision making process.[52]

According to this statement, then, the doctrine takes into consideration two key differences between OOTW and conventional operations. They are the requirements for more detailed information and for demographic information.

The doctrine contends that the differences between humanitarian assistance operations and war are more quantitative than qualitative. It says that the challenge is one of acquiring more information. Following the same IPB process, the doctrine state, intelligence officers will be able to do for humanitarian assistance operations what they do for conventional combat situations. According to the doctrine, more detailed information, including demographics, will permit a prediction of the enemy courses of action in a humanitarian assistance operation.

II.C. CASE STUDIES

The purpose of this monograph is to assess the IPB process for humanitarian assistance (HA) operations. Three case studies of HA operations provide a basis for the assessment. The examination of the case studies uses the assumptions derived from the IPB process (see section II.B.). The adequacy of the IPB process depends on the extent to which the assumptions accurately represent the HA situations from the perspective of an Army intelligence representative who participated in it.

This assessment has at least two limitations. One limitation is that it does not support broad, unconditional generalizations or conclusions. Humanitarian assistance is a label placed on a wide variety of operations. This study examines three different operations, each of which was conducted under very different circumstances. Specific conclusions drawn from any one of these operations will not necessarily apply to any future operations that may fall into the humanitarian assistance category. However, certain aspects characterize the nature of many humanitarian assistance operations. Through careful analysis it is possible to identify those common aspects as a basis for useful comparison.

A second limitation is that the assessment does not involve concrete data that lend themselves to precise measurement. The examination of the case studies relies on individual perceptions, observations, and experiences. The information used comes from interviews and after-action reports by intelligence officers who participated in the operations. They made concerted efforts to provide objective and comprehensive information. Even so, the information provided is an interpretation that might appear differently from someone else's perspective.

Despite these limitations, this assessment has value. It shows patterns that occurred in three different humanitarian assistance operations. Those patterns may indicate trends. Trends give potentially important information about relationships and patterns in a given context. In these case studies trends indicate how U.S. Army forces and their doctrine are relating to the humanitarian assistance operating environments.

The case studies used in the assessment are:

1. Operation SEA SIGNAL, Guantanamo Bay, Cuba

2. Operation RESTORE HOPE, Somalia

3. Operation SUPPORT HOPE, Rwanda

Presentation of these case studies includes a summary of the operation, and a description of how the IPB assumptions applied in each case.

The assumptions drawn from the IPB process (as described in section II.B. of this monograph) are:

1. The most critical elements of the environment are weather, terrain, and the enemy in a discrete geographic area, with an additional consideration of demographics for operations other than war.

2. There is an enemy or threat that will conduct something that resembles combat operations.

3. There is a substantial data base of information that can reveal how the threat organizes and conducts combat. If such a data base does not exist, there will be enough time and information to develop one.

4. That the enemy's actions are predictable.

For each case study, these assumptions are addressed under the headings: The Environment, The Threat, The Data Base, and The Ability to Predict. Other issues worthy of note are also presented.

CASE STUDY: Operation SEA SIGNAL, Guantanamo Bay, Cuba

Operation SEA SIGNAL began in 1994 and is still ongoing in 1995. It is concerned with the care and security of Haitian and

Cuban migrants. This study examines only that portion of the operation dealing with Haitian migrants.

Conditions in Haiti had deteriorated since the 1991 coup and under the military dictatorship of Raoul Cedras. Prior to the United States' military intervention in Haiti in 1994, large numbers of Haitian citizens attempted to leave the island for the United States. The majority sought passage by way of small water craft across perilous ocean waters. U.S. Atlantic Command formed Joint Task Force 160 (JTF 160) to assist in the official processing of migrants, and to provide needed life support measures and protection of human rights. Initially the processing took place at sea aboard the USS Comfort. Eventually the large number of migrants exceeded the capacity of the ship, and JTF 160 relocated the majority of its operations to Guantanamo Bay, Cuba. Operation SEA SIGNAL may be characterized by its purpose to support another government agency, the Immigration and Naturalization Service, in the conduct of its primary mission, the processing of migrants.[53][54]

The Environment. Terrain analysis was important with respect to the unique features of the island areas encompassed in the operation. Weather analysis was extremely important, especially its impact on the ocean waters and the focus on survivability of water craft. Hurricanes were of utmost concern. Means and methods for understanding and reporting the weather probably received more emphasis for this naval oriented operation than it would for a conventional Army operation. Weather charts and the possible relationship between the increase or decrease of migrants from the sea were the only graphic products that the J2 used. Demographic

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and cultural analyses were also important in order to gain an understanding the migrants and their plight.[55]

Political considerations were an aspect of the operational environment that the J2 found extremely important. U.S. political policies heavily influenced how the JTF 160 conducted the operation, and how the migrants reacted.[56]

The Threat. There was no enemy combat force. The J2 focused on two threats throughout the operation. One was hurricanes. They posed a danger to the migrants, the U.S. forces, and to accomplishment of the mission. The other threat was the attitude of the migrants. If they became unhappy enough to riot or carry out violence, their actions would also endanger the U.S. forces, other migrants, and the mission.[57]

The Data Base. There was no data base on Haitian migrants, and limited information on migrant operations with Cubans accumulated prior to this operation. The J2 deployed with forty-eight hours notice. He determined his most important immediate requirement was to acquire information from and about the other agencies involved in the operation. Those agencies included the U.S. Departments of State, Justice, and the U.S. Immigration and Naturalization Service.[58]

Accumulation of tactical data took place once the operation was underway. JTF 160 used its own assets, primarily counterintelligence and interrogation teams, to collect information on the migrants in the camps. The J2 relied on a computer software program for storm tracking.[59]

Ability to Predict. After the J2 assets collected information and analyzed the situation, the only patterns that lent themselves to prediction of migrant activities involved politics. He found that in "very rough terms," he could say that seventy-two hours after a political announcement there would be a peak in migrant craft transiting the ocean.[60]

Otherwise, the J2 developed no ability to "template" the "enemy" activities. His own analysis allowed him to say that as living conditions got worse in the migrant camps, the attitudes of the migrants would decline, and the problems of safeguarding them would increase.[61]

Other Comments: The J2's assessment was that he was able to use the IPB process as far as conducting extensive weather and terrain analysis, but the rest of the IPB process *"was not useful."* "This was not a force-on-force operation. How do you wargame a mob, or a hurricane season, or the insecurities of your forces feel about not being able to take care of the refugees?" On the whole he noted difficulties in defining, templating, and wargaming the threat.[62]

Another issue regarding the perception of the threat at the tactical level concerned the J2. The military police (MP) brigade responsible for the safety and well-being of the migrants in the camps at Guantanamo Bay experienced problems in their treatment of the migrants. The MP's attempted to organize and treat the migrants as they were prisoners of war -- former enemy soldiers. However, there was no unifying, integral military structure to facilitate control of migrants who came from disparate and

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sometimes rival groups. The migrants became dangerous when they formed mobs and acted violently. The MP's became frustrated when the migrants did not respond as the MP's anticipated. It was difficult for the MP's to understand the anger and frustration the Haitians felt when the MP's were really trying to help and do the right thing. The J2 regarded this problem as one of differences in perspective that should be adderessed in training and preparation for this type of operation.[63]

Summary. The IPB process in Operation Sea Signal applied to terrain and weather analysis, but otherwise was "not useful" to the JTF 160 J2. Terrain and weather analysis were important, but political aspects were equally important. JTF 160 did not deal with a clearly defined threat. There was no threat data base from which to draw information. The J2 achieved a very limited ability to predict "threat" activities.

CASE STUDY: Operation RESTORE HOPE, SOMALIA

United States Army actions in Somalia during 1992 and 1993 represent a humanitarian assistance operation in a highly complex environment of conflict. Joint Publication 3-0, <u>Doctrine for Joint Operations,</u> notes that Operation RESTORE HOPE

> ". . . demonstrated complexity of integrating peace support
> operations with other types of operations and provided a
> glimpse of a new style of post-Cold War military
> operations."[64]

A report from the Center for Army Lessons Learned further elaborates on the difficulty of that humanitarian assistance operation:

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In many respects, Operation RESTORE HOPE represents a first for U.S. forces in fulfilling peace enforcement and peacekeeping roles while supporting UN humanitarian assistance efforts. The term 'humanitarian assistance,' as used here, however, does not fully explain the range of missions dictated by the unusual situation that existed in Somalia. With the absence of a legitimate government for U.S. forces in fulfilling peace enforcement and peacekeeping roles and due to the number of warring factions, military forces were involved in every aspect of the restoration or order from limited combat operations to political negotiations and reconstruction of the national infrastructure.[65]

Prior to and during U.S. involvement, the environment in Somalia was characterized by political unrest, civil war, and violence between clan families. The government had collapsed, and the citizens were starving. In April, 1992, the United Nations began operations in Somalia (UNOSOM) with a peacekeeping force to monitor a cease fire between warring factions.[66] United States intervention for humanitarian assistance in Somalia significantly increased on December 3, 1992. A warning order issued by the Joint Chiefs of Staff (JCS) to the United States Commander in Chief, Central Command (USCINCENT) initiated execution of Operation RESTORE HOPE. The Commanding General (CG), 1st Marine Expeditionary Force (I MEF) commanded the Joint Task Force (JTF) for the operation. The CG, 10th Mountain Division (Light Infantry) commanded the Army forces (COMARFOR). The operation commenced six days later when the Marine forces conducted an amphibious assault near Mogadishu, and Army forces began to deploy.[67] Information for this case study pertains specifically to the US Army forces involved from the 10th Mountain Division.

The Environment. The 10th Mountain Division G2 (intelligence section) noted the importance of terrain analysis during this operation, but identified a change in focus from conventional war. Analysis of the environment in Somalia focused on population centers and routes that support the movement of supplies. Key terrain included facilities which could provide medical support, food storage, water, and transportation assets. Aspects of terrain analysis that were similar to conventional operations included identifying natural choke points and natural or man-made obstacles.[68]

The G2 identified analysis of demographics as the most important aspect of the environment. Demographic analysis included cultural, political, economic, and social factors. Without such analysis, the tools used to facilitate military operations that tended to rely exclusively on analysis of the terrain, weather, or enemy became problematic. Military boundary lines were an example. The post-operation G2 report included this recommendation on humanitarian assistance operations:

> Areas of operation should coincide with traditional political, ethnic, or other historical boundaries. Avoid drawing convenient military boundary lines. The arbitrary drawing of boundary lines will split traditional communities, hamper relief efforts, and increase the possibility of civil disturbance.[69]

The G2 also reported the need to coordinate such features as boundaries with the other agencies and forces in the operating area.[70] This recommendation underscores the increasingly complex considerations that arise when the U.S. military forces are neither the sole nor the lead entity attempting to influence the environment.

The Threat. The G2 reported the lack of a "red force" as an issue that caused adjustment in the intelligence process. The G2 reported:

> In this operation, the threat to the force came from several different directions. Intra and inter clan fighting, former military groups fighting, and bandits. Isolated acts of violence were the norms.[71]

The G2 suggested focusing on the commander's desired "end state" and the individual problems that need to be resolved in order to achieve it.[72]

The Data Base. The G2 found the data base lacking in several respects. Maps and topographic data were insufficient both in terms of quantity and quality.[73] There was no threat data base in existence -- a problem inseparable from being unable to define or identify a consistent threat. The report referred to the requirement to build data bases after the forces arrived in Somalia -- a process characterized as "slow and arduous."[74]

The Ability to Predict. The G2 did not comment directly on the predictive ability that they developed, although the report did discuss limitations on the G2's ability to generalize. According to the report:

> It is important not to draw conclusions about a specific area and then try to apply the conclusions to all regions/sectors. Particularly, the Somali society is composed of clans, sub clans, and sub sub clans. Each group or sub element of a community has its own peculiar set of economic, social, and political needs and problems.[75]

The G2 also commented on techniques developed for the purpose of anticipating events:

An incident overlay was created by the brigade which was used to developed (*sic*) order of battle, tactics and NAIs *(named areas of interest)*. A modified Event Template was constructed (*sic*) from this. The end product drove the reconnaissance and surveillance activities as well as the security operations within the Humanitarian Relief Sector(HRS). TAIs *(target areas of interest)* equaled key terrain. These were targeted for interdiction and security operations.[76]

The G2 did not comment on the degree of success in using these methods.

Other Comments.

The IPB process had to change for operations in Somalia. One reason for change was the requirement to build the data base. The G2 reported that "threat integration occurred before the development of the doctrinal and situational templates."[77] In other words, templates were useful to some extent, but had to be developed while the operation was ongoing, and therefore could not be part of the initial IPB process. Change in the process also occurred in the way the G2 expressed information graphically. The G2 used different types of overlays taken from procedures adopted for low intensity conflict. The types of overlays included map overlay products for population status, cover and concealment, and logistics.[78] There was also a need to change graphic symbols, as revealed by the G2's comment:

The graphics used by Joint Task Force Somalia are not the same as those in Army doctrinal publications. As the Army expands its role and mission to include operations such as Humanitarian Relief Operations, additional graphics such as those depicting humanitarian relief sectors should be considered for addition to Army doctrine.[79]

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The G2 further expressed a need not just for more graphic symbols, but a graphics format that would depict a different, nontraditional view of the operational area:

> Army doctrine for operational graphics tends to stress linear operations. Humanitarian relief operations such as JTF-Somalia breaks the mold of linear concepts of operations. Additionally, Army doctrine stresses the designation of sectors of responsibility using easily identifiable boundaries such as roads, and natural landmarks. These defining characteristics are not easily used in underdeveloped areas of operation such as Somalia.[80]

Finally, according to the G2, the analysis for operations in Somalia had to try to answer questions that were fundamentally different from conventional war.

> Unlike High and Mid Intensity Conflict, in which ground Order of Battle, capabilities and enemy course of actions are the primary products produced, intelligence production . . . relies heavily upon Humint and Counterintelligence analysis. Analysis must be concerned with political questions such as, "How can the people be made to support the operation; Who will the people follow; What group/faction is the most influential; Who is the enemy?"[81]

Summary. The 10th Mountain Division G2 attempted to use all the steps of the IPB process with limited success. The operation required major changes to the conventional doctrinal process. Terrain analysis was critical but had a different focus than in conventional operations. Analysis of demographics was the most important aspect of the environment. There was no single "red force" yet there were multiple threats to U.S. forces. The data base was severely lacking and had to be built slowly and arduously after the operation began. The G2 did develop some predictive capabilities, but they were limited to regions or sectors and did not

provide a basis for generalizations. The requirement to understand the threat preceded the G2's ability to predict any threat actions. Standard graphic symbols did not adequately convey the necessary information. The most important questions were fundamentally different from those of conventional war.

CASE STUDY: Operation SUPPORT HOPE, Rwanda

Operation SUPPORT HOPE was the U.S. military response to a refugee crisis in Rwanda. The crisis involved civil war, the massacre of approximately 500,000 Tutsis, and the subsequent exodus of huge numbers of people from Rwanda in the spring of 1994.. On July 22, 1994, the Joint Chiefs of Staff issued an Execute Order directing the Commander, US European Command (EUCOM), to provide military support to relief efforts by the United Nations and non-governmental relief organizations. Joint Task Force SUPPORT HOPE provided assistance to humanitarian agencies and third nation forces conducting relief operations in Zaire and Rwanda. The after action report used for this study states that:

> Unlike U.N. relief agencies that <u>sustain</u> support to semi-permanent camps, U.S. military efforts around Goma were appropriately aimed at mitigating the results of a crisis that was man-made and, to a large extent, deliberate. . . . When the crisis had been contained, U.S. forces were appropriately withdrawn.[82]

U.S. Army forces (initially designated Task Force 51) produced clean water, prepared refugee sites, and undertook sanitation projects. The operation involved five conceptual phases, some of which occurred simultaneously. They were: (1) Stop the dying in Goma; (2) Support of stability in home provinces; (3) Support to

Humanitarian Relief Organizations; (4) Turnover of support activities to appropriate UN agencies; (5) Redeployment of US forces. Final redeployment of US forces occurred on September 28, 1994.[83]

The Environment. The J2's portion of the After Action Report from Operation SUPPORT HOPE placed great importance on terrain and weather analysis. In particular, information about lines of communication was important and difficult to obtain.[84]

The J2 also emphasized requirements for demographic analysis. There was a need for better intelligence on refugee numbers and their anticipated reaction to U.S. presence. The J2 recommended that units deploying on similar humanitarian assistance operations be briefed by foreign area officers or special operations forces representatives with recent experience in the area.[85]

The Threat. The importance of recognizing and analyzing potential threats to U.S. forces received a great deal of attention in the after action report. Evidently planners made an assumption:

> . . . that there was little or no threat associated with US humanitarian operations in Central Africa. This assumption proved to be false, as there was a considerable nontraditional 'enemy' to be dealt with, not to mention a more traditional threat which emerged over time.[86]

This erroneous assumption caused problems in manning and planning for force protection.

The report also emphasized the changing nature of the threat that U.S. forces faced:

> The 'enemy' in this operation was non-traditional. . . . The 'enemy' was defined by the situation as it developed rather than having a well-defined enemy interact with the terrain to create a situation. . . .

The 'enemy' therefore changed with the situation. At first, tracking the numbers of refugees to support logistical planning was the intelligence focus, along with attempting to identify potential threats to the force. As the refugee situation stabilized, the need to follow trends in refugee movement took priority in order to anticipate and plan for other potential crises. In addition, as ex-FAR forces recovered and began to regain cohesion (as a direct result of receiving, or better, diverting humanitarian aid) an increasingly higher priority was given to tracking this emerging, more traditional threat.

Soon it became clear that the Rwandan civil war, which had not ended, was about to enter a new phase and that the ex-FAR was planning to rejoin the battle. . . . At that point, a more traditional enemy began to emerge: a military force being used to serve political ends.[87]

The Data Base. The J2 lacked information on the areas where they would operate. The intelligence received prior to deployment was "extremely vague."[88] The J2 was not certain which refugee population the Joint Task Force was to support until units arrived the area of operations. The J2 reported:

> Little or no intelligence database was available regarding the area of operations and, in particular, the potential threat to deployed forces. Such information was especially critical for the initial assessment team, as well as for the first JTF units on the ground,
> The initial database available to the JTF J2 staff was extremely limited. Very little had been published regarding the AOR (area of responsibility), save a TRANSCOM area study and a DIA paper published approximately one week after operations began. Information on potential threats . . . was very limited. Information on disposition of potential threat forces was virtually nonexistent at the start of operations. As in past crises, the database was built as the JTF negotiated its very steep learning curve.[89]

The Ability to Predict. The J2 reported that they were not successful in attempts to predict the actions of threats to U.S. forces:

Given an 'enemy' with no doctrine or logic to his behavior (driven by fear rather than reason), no patterns or signatures were identified to be used in support of predictive analysis.[90]

Other Comments. The after action report addressed the complexity and scope of the situation in Rwanda and Zaire. The JTF staff had difficulties trying to understand and plan for Operation SUPPORT HOPE. The following paragraph indicates how political considerations became an overriding concern and how traditional forms of intelligence preparation were not adequate:

> The JTF staff conducted an effective estimate based on METT-T (Mission, Enemy, Troops, Terrain, and Time) prior to our deployment. What we should have looked at harder, though, was the *political* situation into which we were headed. The Rwanda Crisis Area is a war zone. The appalling refugee situation, with its deaths and extreme hardships on innocent people, is in fact a deliberately orchestrated, operational-level part of the Rwandan civil war, which also includes the massacres that had taken place in Rwanda since April of this year. It became important to understand that civil war and refugee tragedy has been with Rwanda for years; may of the camps around its borders have been there for decades. The previous government, with its army, had generally escaped intact and had not agreed to the unilateral cease-fire declared by the victors in Kigali. For all indications, the refugee exodus that had occurred in July had been encouraged, if not ordered, by the previous government. This situation meant that the JTF, on a humanitarian assistance mission, could not appear to be taking sides or cooperating with the United Nations Assistance Mission In Rwanda (UNAMIR), a UN military command with a peacekeeping mission. Further, our · assessment was that a resumption of the civil war is likely within 6 weeks to 6 months. . . . [91]

Summary. The J2 attempted to use the doctrinal IPB process with limited success, and had to overcome some dangerous assumptions. Terrain and weather analysis were important, but demographic analysis was also critical. Lack of a conventional enemy

contributed to the dangerous assumption that there was little or no threat to U.S. forces. Threats to U.S. forces were real, nontraditional, and dynamic. There was no data base available when planning for the operation started. Attempts to predict enemy activities were unsuccessful. The METT-T analysis conducted prior to the operation excluded important aspects such as the political situation.

III.A. ANALYSIS AND EVALUATION

Analysis of the doctrinal IPB process as it applied to the three case studies indicates a number of problems. Those problems relate to the assumptions that are inherent in the process and that stem from systemic dependence upon a Soviet military threat. This analysis addresses the problems in terms of the underlying assumptions.

Analyzing The Environment

The first assumption of the IPB process is that the terrain, weather, and the enemy are the essential elements of the environment that require analysis. They are couched in the commonly used acronym "METT-T" (Mission, Enemy, Troops, Terrain and Weather, and Time). In the case studies, weather and terrain were important considerations, but there were other factors that were at least if not more important. All three case studies revealed other critical aspects of the environment such as political, demographic, and cultural influences, that required extensive analysis. In other words, "METT-T" was not enough.

Chapter 6 of the IPB doctrinal manual, FM 34-130, does list a number of additional "battlefield effects" to consider in humanitarian

assistance operations (see Appendix A). This check-list style approach provides only superficial guidance that is limited in its value. Some of the points listed would have applied in the case studies, and others would not. There is no framework presented for discerning which points would have bearing on decision making in a given situation. Neither does the manual convey how to accomplish the analysis using the additional considerations. For example, it does not describe how to conduct a demographic or political analysis or how to integrate such an analysis into the IPB process.

Analyzing The Threat

The second assumption is that there is an opposing enemy organized to conduct combat operations. All three case studies noted difficulties in identifying and analyzing threats to US forces. Threats in the case studies included hurricanes, attitudes of migrants, isolated acts of violence, and indigenous ex-military forces. Many of the threats changed over time, some threats changed often. The ways intelligence officers and U.S. forces had to evaluate and respond to the threats also changed from conventional methods. For example, even though the attitudes of the Haitian migrants were the perceived threat, the mission required that U.S. forces not treat the migrants as the enemy.[92]

Chapter 6 of FM 34-130 does suggest alternative kinds of threats, but it does not acknowledge any significant change to the IPB process. It advises consideration of threats such as weather and the environment, or neutral groups that may become hostile. As with the considerations of the environment, some aspects presented in the manual might have been relevant to the case studies while

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others would not have been.   There is no discussion of how to discern which threats to consider, or how evaluation of alternative kinds of threats might differ from a conventional Soviet style enemy.   Neither is there discussion of how the different kinds of threats might affect decision making.   The manual gives the impression that hurricanes or mental attitudes can substitute for Soviet order of battle with no change in the IPB process.

The Data Base

The third assumption is that a large data base exists comparable to what exists for the Soviet threat.   Lack of a substantial data base was a problem in all three case studies.   Time to accumulate the data was also a problem.   Such basic tools as maps were not available in two of the cases.   The scope of information needed was extremely broad.   Most of the important information that the forces did acquire became available after the operations were well underway.

Chapter 6 of FM 34-130 glosses over this problem with one brief statement: "Use non-Department of Defense assets and HN [host nation] resources to fill voids in the data base and map coverage of the AO [area of operations]."[93]   It does not address the substantial amount of time and resources, including personnel, that would be required to accomplish the necessary research to fill out the data base.   Neither does it address where or how to acquire the needed information, except to recommend the use of non-Department of Defense assets and Host Nation resources.

Prediction

The fourth assumption is that through the use of templates the enemy's actions will be predictable. Two of the case studies show problems in this area. The reports for the other case study, Operation RESTORE HOPE, do not comment directly but caution against making broad generalizations based on patterns observed locally. The nature of the threats in at least two of the case studies did not permit the successful use of templates to support predictive analysis. For example, the Rwandan case study provides the following comment:

> Given an 'enemy' with no doctrine or logic to his behavior (driven by fear rather than reason), no patterns or signatures were identified to be used in support of predictive analysis.[94]

Chapter 6 of FM 34-130 fails to address the problem of not being able to predict threat intentions. It does provide a list of points and considerations (see Appendix A, this monograph) for determining threat courses of action. The first point, for example, is: "Start with threat objectives and develop COAs *(courses of action)* from there. Consider all COAs. . . . Do not focus on strictly confrontational COAs."[95] This and the other points are tied to the assumption that prediction is possible, although there is a hint that alternative analytical approaches may be necessary. The last point the manual provides is: "Use MDCI (multi-discipline counterintelligence) for force protection. It provides you with vulnerability assessments and will assess all threats whether actual or potential. As they are identified, pursue them accordingly."[96] In

other words, the IPB process itself will not adequately address the threats that are likely to arise in a humanitarian assistance operation.

A summary of this analysis, then, is that the IPB process did not work effectively in the three case studies of humanitarian assistance operations. Attempts within the key doctrinal manual for IPB, FM 34-130, to address OOTW and humanitarian assistance considerations are not adequate. Despite the long lists of special considerations, the doctrine contends that the process does not change. The doctrine purports that the basic assumptions for IPB conducted in conventional operations hold true regardless of the mission or the context of the operation. The three case studies demonstrate that the assumptions are not always true. Moreover, the case studies are examples of how the doctrine does not provide adequate guidance for situations where the assumptions change.

These observations of the IPB process in humanitarian assistance operations parallel those made by the Office of the Assistant Secretary of Defense for Low Intensity Conflict regarding intelligence support to operations other than war. A White Paper published by that office in January, 1994 states:

> Intelligence support to OOTW is a dynamic and complex task. This is in sharp contrast to DoD intelligence collection, processing, and dissemination during the Cold War, which was relatively organized and predictable, due in large part to a well-understood and stable threat. In the post-Cold War period, despots, arms dealers, terrorists, drug traffickers, and ancient ethnic rivalries constitute OOTW threats that defy routine analysis and tracking. Intelligence support to OOTW requires different strategies, procedures, and methods.[97]

The White Paper is critical of an over-reliance on the traditional approaches to intelligence support. It calls for new developments in doctrine based on increasing involvement of US forces in OOTW:

> Doctrine for intelligence support to OOTW is being developed as missions evolve. There is some indication, however, that initial versions of this doctrine are skewed toward the higher end, i.e., in support of deploying major U.S. forces and their traditional application of military capabilities. Using recent lessons learned as a basis, OOTW doctrine in nontraditional military areas, such as military intelligence support to interagency, coalition, and U.N. operations, must not be overlooked; rather, this doctrine should be featured, given the likelihood of recurrence of these operations.[98]

III.B. SOME THEORETICAL CONSIDERATIONS

An attempt to apply theory directly to the case studies would be inappropriate. In his discussions of the theory of war, Carl von Clausewitz cautions that theory should be used for study and not applied as doctrine. In his treatise, On War, Clausewitz describes theory as:

> . . . a guide to anyone who wants to learn about war from books; it will light his way, ease his progress, train his judgment, and help him to avoid pitfalls. . . . It is meant to educate the mind of the future commander . . . not to accompany him to the battlefield.[99]

Bearing in mind that caution however, some concepts from general systems theory shed light on the problems that arise with the current doctrinal IPB process. Two of those concepts come from Peter Senge's writings on systems thinking and learning organizations. The concepts are "mental models" and "dynamic complexity."[100]

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Mental models are internal images of how the world works, that limit people to familiar ways of thinking and acting.[101] They are "deeply ingrained assumptions, generalizations, or even pictures or images."[102] Mental models shape perceptions. They determine how people make sense of the world and how they take action.[103]

Working with mental models is one of the core disciplines that Senge associates with systems thinking. Recognition of mental models reveals shortcomings and inconsistencies in ways of seeing and thinking about the world. Senge contends that managing mental models effectively involves surfacing, testing, and improving them. Tacit mental models are the most problematic, he points out, because they remain unchallenged and unchanged.[104]

Intelligence preparation of the battlefield doctrine describes a mental model. That model includes the assumptions inherent in the IPB process. The assumption that analysts can reduce the key aspects of the environment to enemy, weather and terrain is part of a mental model. The expectation that there will be an opposing enemy organized to conduct combat operations is another part of that model. Reliance on a large existing data base and templates for predicting enemy actions are also part of the mental model. Adherence to this mental model limits thinking and action in an operational environment.

A second important concept that Senge uses in systems thinking is dynamic complexity. It derives from the general systems view that there are two kinds of complexity--detailed and dynamic. Senge describes mixing ingredients for a recipe or taking inventory as examples of detailed complexity. Both activities involve following

a complex set of instructions and a list of variables. There are many sophisticated tools and elegant plans, Senge points out, that handle a large number of variables and therefore deal with detailed complexity.[105]

Alternatively, Senge describes dynamic complexity as "situations where cause and effect are subtle, and where the effects over time of interventions are not obvious."[106] He explains further:

> When the same action has dramatically different effects in the short run and the long, there is dynamic complexity. When obvious interventions produce nonobvious consequences, there is dynamic complexity.[107]

Most traditional methods of analysis, Senge states, ". . . are not equipped to deal with dynamic complexity."[108]

Methods of analysis that deal with dynamic complexity emphasize patterns and interrelationships. Senge states that, "The essence of the discipline of systems thinking lies in a shift of mind." That shift involves seeing interrelationships between friendly and threat actions, for example, rather than "linear cause-effect chains." It also involves seeing delays between actions and consequences, and patterns of change rather than "snapshots," or templates, for example, in the IPB process.[109]

The doctrine for IPB does not adequately address the dynamic complexity that is likely to exist in humanitarian assistance operations. Chapter six of FM 34-130 attempts to deal with humanitarian assistance by adding a long list of considerations to the basic IPB process. This approach is one of detailed complexity. The

challenges of humanitarian assistance operations entail a fundamental shift in the analytical process, not simply more detail and different kinds of templates.

Together the concepts of mental models and dynamic complexity provide an explanation of how the IPB process can limit thinking and action in an operational environment. Such limitations are detrimental to analysis of humanitarian assistance operations that are complex in nature. According to Senge's model for systems thinking, overcoming those limitations requires challenging and changing existing mental models, and shifting the approach from a search for more details to an examination of patterns and interrelationships. A systems thinking approach to humanitarian assistance operations would involve changing the IPB process as FM 34-130 portrays it.

IV. CONCLUSIONS AND RECOMMENDATIONS

The process presented in FM 34-130, <u>Intelligence Preparation of the Battlefield</u>, is not an adequate tool for analysis of humanitarian assistance operations. The assumptions inherent in the IPB process derive from a conventional model of conflict against a Soviet style threat. Those assumptions limit understanding of the complex environments which characterize humanitarian assistance operations. Although FM 34-130 attempts to address special considerations for humanitarian assistance operations in Chapter Six, the approach does not match the dynamic complexity of such operations.[110]

It is easier to criticize existing doctrine than it is to improve it. The purpose of this monograph is primarily in the first and easier realm -- to address problems in intelligence doctrine as it applies to

humanitarian assistance operations. From the analysis some general recommendations are possible, however. All of them relate to changing the doctrine so that it accurately reflects the kinds of environments in which humanitarian assistance operations will take place.

The first recommendation follows Senge's approach for dealing with mental models. Military intelligence professionals need to surface, challenge, and change existing assumptions. This recommendation counters the doctrinal and popular positions on the issue.

FM 34-130 states:

The four steps of the IPB process remain constant regardless of the mission, unit, staff section, or echelon. The art of applying IPB to operations other than war is in the proper applilcation of the steps to specific situations.[111]

Breaking the mental model also goes beyond what some intelligence officers with experience in humanitarian assistance operations have suggested. The 10th Mountain Division G2 for Operations Restore Hope assessed that the problems encountered in Somalia required only modifications to the existing process. The G2 commented: "Intelligence staffs should not become fixated on executing doctrine in a lockstep manner."[112]

A systems approach to intelligence preparation for humanitarian assistance requires more radical change than those two positions imply, however. It calls for changing the limiting assumptions that underlie the current IPB process. It demands a new process that can apply when there is not a clearly defined threat

or extensive data base, and when resources are limited. Intelligence preparation must break away from the old mental model to be effective.

The second recommendation is that the doctrine for intelligence preparation in humanitarian assistance operations must incorporate an approach for dealing with dynamic complexity more than detailed complexity. The process should derive from a new set of assumptions that characterize a dynamic, complex environment. It should not rely on templates or an ability to predict outcomes. The process must aid in dealing with uncertainty and change that will inevitably exist in complex environments.

The third recommendation concurs with the White Paper published by Office of the Secretary of Defense, Special Operations and Low Intensity Conflict. Lessons gleaned from humanitarian assistance operations must serve as a primary resource for development of new doctrine.[113] These lessons can highlight tactics, techniques and procedures, including graphic products, that have been beneficial in humanitarian assistance operations. The doctrine should be broad enough to accommodate the lessons learned in a meaningful framework that conveys accurate assumptions about the operational environments.

Humanitarian assistance operations are a type of mission that the U.S. Army can expect to perform repeatedly in the foreseeable future. Doctrine serves as the guidance for preparing Army professionals for the missions they will undertake. The current doctrine for intelligence preparation of the battlefield is inadequate guidance for the challenges of humanitarian assistance operations.

To better prepare Army professionals, FM 34-130 needs to change by incorporating a systems approach based on assumptions that accurately reflect an environment of dynamic complexity.

Appendix A: Extract from U.S. Army Field Manual 34-130, Intelligence Preparation of the Battlefield, Washington, DC, 8 July 1994. Chapter 6, "Intelligence Preparation of the Battlefield for Operations Other Than War," "Humanitarian Assistance and Disaster Relief," pp. 6-1 - 6-3.

Humanitarian assistance operation provide emergency relief to victims of natural disasters when initiated in response to domestic, foreign government, or international agency requests for immediate help and rehabilitation. Disaster relief operations include activities such as --

- Refugee assistance.

- Food distribution programs.

- Medical treatment and care.

- Restoration of law and order.

- Damage and capabilities assessment.

- Damage control (including environmental cleanup and programs such as fire fighting).

Define the Battlefield Environment:
The AO will normally be assigned by higher headquarters. The AI should include--

- Potential sources of assistance from outside the disaster area.

- Areas or activities that might generate refugees moving into the AO.

- Further threats to the AO, such as severe weather patterns or paramilitary forces and gangs.

- Identify all military, paramilitary, governmental, and nongovernmental (Red Cross, Hope, and so forth) organizations that may interact with the friendly force.

• Establish criteria to judge extent of the disaster and track the progress of recovery operations.

Describe the Battlefield's Effects:

• Determine the present and potential extent of the disaster. Identify the likelihood of additional floods, earthquakes, mud slides, displaced persons, and so forth.

• Identify the population sectors which require assistance and determine the type needed.

• Coordinate with local law enforcement agencies for information on gang "boundaries." Identify the amount of influence each group has over the local population.

• Focus on demographics. Consider, for example, the effects of--

    ° Population distribution patterns.

    ° Ethnic divisions.

    ° Religious beliefs.

    ° Language divisions.

    ° Tribe, clan, and sub-clan loyalties.

    ° Health hazards.

    ° Political sympathies.

• Consider the effects of the logistic infrastructure such as --

    ° Location, activity, and capability of care distribution points (food, health care, and so forth).

    ° Sources of food and water.

    ° Housing availability.

    ° Hospital capabilities.

o   Utility services (water, electricity, and so forth).

o   Law enforcement agencies and capabilities.

o   Emergency services (fire department, and so forth).

•   Determine if the environment is permissive or hostile to the introduction of US Forces. While governmental agencies may welcome US Forces, other elements of the population may not.

•   Use non-Department of Defense assets and HN resources to fill voids in the data base and map coverage of the AO. For example, census data can provide demographic data; law enforcement and emergency service organizations can provide information on local infrastructure.

•   Identify the limits of our commander's authority. Can he financially obligate the government? Does he have the authority to enforce laws? To assist law enforcement agencies?

Evaluate the Threat:

•   Consider weather and the environment as potential threats. Weather will impact on your ability to conduct relief operations. For example, if the target of a relief effort is a village isolated by mud slides or another natural disaster, inclement weather may limit or curtail air operations to the site.

•   The environment may pose threats to the health of both mission and HN personnel in the forms of waterborne diseases, spoiled or contaminated foodstuffs, and other environmental hazards.

•   Identify and evaluate the threat posed by any groups that may oppose friendly force operations. Consider groups that my clandestinely oppose the operation even though they publicly pledge support.

•   Consider initially neutral groups and personnel that may become hostile as the operation progresses. What action is necessary to keep them neutral?

•   During support to law enforcement agencies, elements of the population may pose significant threats. Use the traditional OB

factors, with modifications to fit the specific situation, to evaluate the threat posed by gangs or similar "organized" groups. Adhere to legal restriction on intelligence operations against US citizens; coordinate with law enforcement agencies for assistance.

• When confronted with riots or similar threats, identify "opinion makers" and other influential members of the local population. Identify potential trouble spots and contentious issues. Adhere to legal restriction on intelligence operations against US citizens.

Determine Threat Courses of Action:

• Start with threat objectives and develop COAs from there. Consider all COAs. For example, if the threat objective is to get US Forces out of the HN, one COA could be to allow the US Force to complete its mission quickly. Do not focus on strictly confrontational COAs.

• Consider the effect of the threat's perception of US Forces has on potential COAs. If US Forces appear overwhelmingly powerful, non-confrontational COAs may be preferred. If US Forces project only minimal power, the threat may pursue higher risk COAs.

• Consider the interaction of each group if faced with multiple threats. Will they cooperate against US Forces? Will they engage each other?

• Evaluate the threat imposed by a degradation of the capabilities of law enforcement agencies.

• Identify likely targets of looting and vandalism.

• Use MDCI for force protection. It provides you with vulnerability assessments and will assess all threats whether actual or potential. As they are identified, pursue them accordingly.

End Notes

[1] U.S. Army, <u>Field Manual 100-5, Operations,</u> (Washington, DC 1993), p. 1-1.

[2] Ibid., p. 1-1.

[3] Ibid., pp. 13-0 - 13-8.

[4] Ibid., p. 3-4.

[5] Ibid., p. Glossary-4.

[6] Ibid., p. 1-1 .

[7] U.S. Army, <u>Field Manual 34-130, Intelligence Preparation of the Battlefield,</u> (Washington, DC, 8 July 1994), p. 6-1.

[8] Ibid., p. 6-1.

[9] The White House, <u>A National Security Strategy of Engagement and Enlargement,</u> (February 1995), pp. 7-12.

[10] Joint Chiefs of Staff, <u>Joint Pub 3-0, Doctrine for Joint Operations,</u> 1 February 1995, p. I-2.

[11] Ibid., p.I-2.

[12] Ibid, p. I-2.

[13] FM 100-5, p. 13-0.

[14] James E. Sefton, <u>The United States Army and Reconstruction, 1865-1877,</u> Louisiana State University Press: Baton Rouge, 1967. Reproduced at Command and General Staff College, Ft Leavenworth, KS by special permission.

[15] Lawrence A. Yates, <u>Power Pack: U.S. Intervention in the Dominican Republic, 1965-1966, Leavenworth Papers Number 15,</u> Combat Studies Institute, U.S. Army Command and General Staff College, Ft Leavenworth, KS, 1988.

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[17] FM 100-20, <u>Low Intensity Conflict Operations,</u> pp. 2-23 & 5-8.

[18] FM 100-20, <u>Operations Other Than War,</u> (Draft), pp. 1-1 - 1-4.

[19] FM 100-5, pp. 13-0 & 13-1.

[20] FM 100-20, (OOTW), p. v.

[21] Joint Chiefs of Staff, <u>Joint Pub 1-02,</u>

[22] FM 100-20, <u>Operations Other Than War,</u> p 3-7.

[23] The White House, <u>A National Security Strategy of Engagement and Enlargement,</u> p. 12.

[24] Sun Tzu, <u>The Art of Warfare,</u> Trans. by Roger Ames, Ballantine Books, New York, 1993, pp. 103-104.

[25] Ibid., pp. 169-171.

[26] U.S. Army, <u>Training Circular 34-3, Intelligence Preparation of the Battlefield,</u> (Washington, DC, 1981), p. i.

[27] Ibid., p. 5-10.

[28] Ibid., p. 2-1.

[29] U.S. Army, <u>Field Manual 34-36, Special Operations Forces Intelligence and Electronic Warfare Operations,</u> (Washington, DC, September 1991).

[30]U.S. Army, <u>OOTW Intelligence Training Support Package, Division, Corps & JTF HQs, Humanitarian Assistance and Disaster Relief,</u> Threat Division, Department of Tactics, Intelligence, and Military Science,(Ft Huachuca, AZ, 1994).

[31]U.S. Army, Field Manual 34-7, <u>Intelligence and Electronic Warfare Support to Low-Intensity Conflict Operations,</u> (Washington, DC, May 1993).

[32]FM 34-130, p. iv.

[33]Ibid., p. iv.

[34]Ibid., p. 1-1.

[35]Ibid., p. 1-1.

[36]Ibid., pp. GL 10 & 5

[37]Ibid., p. GL 4.

[38]Ibid., pp. GL 4 & 1-2.

[39]U.S. Army, <u>Student Text 101-5, Command and Staff Decision Processes,</u> U.S. Army Command and General Staff College, (Fort Leavenworth, KS, February 1995), p. 5-17.

[40]FM 34-130, p. 1-2.

[41]Ibid., p. 1-2.

[42]Ibid., p. 1-2.

[43]Ibid., p. 1-2.

[44]Ibid., p. 1-3.

[45]Ibid., p. 1-3.

[46]Ibid., p. 1-3.

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[48]ST 101-5, pp. 1-13 - 1-15 and A-5.

[49]Ibid., pp. 3-11 - 3-13.

[50]FM 34-130, Chapter 6.

[51]Ibid., p. 6-3.

[52]Ibid., p. 6-1.

[53]U.S. Army, <u>Center For Army Lessons Learned (CALL) Report, Migrant Camp Operations Panama/Cuba, Initial Observations,</u> U.S. Army Training and Doctrine Command (TRADOC), (Ft Leavenworth, KS, May 1995).

[54]Interview with TF 160 J-2, United States Army Military Intelligence Officer, LTC Lyle Radebaugh, (Fort Leavenworth, KS, 5 September 1995).

[55]Ibid.

[56]Ibid.

[57]Ibid.

[58]Ibid. The J2 noted in particular the instructional value of video tapes of military police soldiers responding to Cuban mob activities that occured during earlier migrant operations.

[59]Ibid.

[60]Ibid.

[61]Ibid.

[62]Ibid.

[63]Ibid. The military police force was responsible for the safety and well-being of the Haitian migrants at what may be regarded as the tactical level. The MPs

organized the migrants in groups according to family structure or gender. For example, one group comprised young males 14 to 23 years of age and older single males. Other groups in separate camps were comprised of families. Many of the families and individuals came from what had been rival groupings in Haiti. These rivalries caused tensions in the camps. There was no integral, unifying structure that organized these groups as there would be for prisoners of war with a military chain of command.

[64]JP 3-0, pp. V-12, V-13.

[65]U.S. Army, Center For Army Lessons Learned (CALL), Operation Restore Hope Lessons Learned Report, 3 December 1992 - 4 May 1993, Operations Other Than War, Combined Arms Command (CAC),(Ft Leavenworth, KS, Nov 93), p. 1.

[66]Ibid., p. 2.

[67]Ibid., p. 1.

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[69]Ibid., JULLS NO: 12543-96835 (00113).

[70]Ibid., JULLS NO: 12543-96835 (00113).

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[72]Ibid., JULLS NO: 12514-37867 (00166).

[73]Ibid., JULLS NO: 11241-30979 (00106).

[74]Ibid., JULLS NO: 12543-96835 (00113).

[75]Ibid., JULLS NO: 12543-96835 (00113).

[76]Ibid., JULLS NO: 12543-96835 (00113).

[77]Ibid., JULLS NO: 12543-96835 (00113).

[78]Ibid., JULLS NO: 12513-96920 (00165).

[79]Ibid., JULLS NO: 11579-71457 (00041).

[80]Ibid., JULLS NO: 11579-71457 (00041).

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[83]Ibid., para. 2, Concept, p. 3 (not numbered).

[84]Ibid., Chapter 3, "Intelligence," p. 3-4.

[85]Ibid., p 3-3.

[86]Ibid., p. 3-7.

[87]Ibid., para 3-44, pp. 3-19, 3-20 (not numbered).

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[89]Ibid., para. 3-31, pp. 3-14, 3-15 (not numbered).

[90]Ibid., para. 3-26, p. 3-12 (not numbered).

[91]Ibid., para. 7, pp. 13, 14 (not numbered).

[92] Radebaugh, interview.

[93]FM 34-130, p. 6-2.

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[95]FM 34-130, p. 6-3.

[96]Ibid., p. 6-3.

[97]U.S. Army, "Intelligence Support to Operations Other Than War," White Paper, Office of the Assistant Secretary of Defense, Special Operations and Low Intensity Conflict, (Washington, DC, January 1994), p. 2-1.

[98]Ibid., p. 2-4.

[99]Carl von Clausewitz, On War, ed. and trans. by Michael Howard and Peter Paret, Princeton University Press, (New Jersey, 1976), p. 141.

[100]Peter M. Senge, The Fifth Discipline, The Art and Practice of The Learning Organization, Doubleday, (New York, 1990).

[101]Ibid., p174

[102]Ibid., p8.

[103]Ibid., p12, 344.

[104]Ibid., p 174-176.

[105]Ibid., p. 71.

[106]Ibid., p 71.

[107]Ibid., p. 71.

[108]Ibid., p 71.

[109]Ibid., pp 72, 73.

[110]FM 34-130.

[111]Ibid., p.6-1.

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[113]White Paper, p. 2-3.

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